

## ABSTRACT

Terminal differentiated cells are proliferated by introducing a cyclin and a cyclin dependent kinase into the nucleus of terminal differentiated cells, and then cultivating or holding the cells. A method for proliferating terminal differentiated cells comprising adding a nucleotide sequence coding for a nuclear localization signal to at least one of a cyclin gene and a cyclin dependent kinase gene, and introducing each of the genes to terminal differentiated cells *in vitro*, and then cultivating the cells, or introducing each of the genes directly to terminal differentiated cells *in vivo* is provided. The cyclin is a cyclin that can activate CDK4 or CDK6, and the cyclin dependent kinase is a cyclin dependent kinase that is activated by D-type cyclin. The invention also provides a recombinant vector used for such a method or a pharmaceutical composition comprising the vector.